

DETAILED ACTION

1. Claims 1-4, 6-13, 15-27, and 29-33 are pending in the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 13 and 15-21 are directed to non-statutory subject matter as the claims are unclear and indefinite.

(i) Claims 13 and 19 are method claims. However, it is unclear as to how the resultant transformation is obtained based on the claimed method steps. To explain further, both claims provide steps of performing a shift and setting up a tail mark in the transforming method. However, there is no final limitation in either claim showing that transformed representation is obtained; thus making the concluding steps of the method claims unclear as to how the final result is obtained based on the previous steps. A suggested example would be to amend into claim 13, "(d) generating the short bit-length digital data," or something similar. An example for claim 19 would be to amend, "generating the long bit-length digital data," or something similar.

(ii) Claims 15-18 and 20-21 are rejected for similar reasons as discussed for their respective parent claims, as they fail to present any limitations that resolve the deficiencies of the claims from which they depend.

Allowable Subject Matter

4. Claims 1-4, 6-12, 22-27, and 29-33 are allowed.
5. Claims 13 and 15-21 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reza et al, A Hybrid Number System and its Application in FPGA-DSP Technology, 2004 Proceedings ITCC 2004, Volume 2, Pages 342-346

Lai et al, Circuits and Systems II: Analog and Digital Signal Processing, June 1993, Volume 40, Issue 6, Pages 382-392

Lei et al, DSP Architecture with Jumping-Floating-Points Number System, Asian Solid-State Circuits Conference, 2005, Pages 405-408

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL YAARY whose telephone number is (571)270-1249. The examiner can normally be reached on Monday-Friday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. Y./
Examiner, Art Unit 2193

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